

ORIGINAL

BEFORE THE
Federal Communications Commission
WASHINGTON, DC 20554

In the Matter of)

PRIMECO PERSONAL COMMUNICATIONS, L.P.,)
DALLAS MTA, L.P., HOUSTON MTA, L.P. AND)
SAN ANTONIO MTA, L.P.)

CC Docket No. 94-102
DA 98-2631

Petition for Waiver of Section 20.18(e) of the)
Commission's Rules)

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

To: Chief, Wireless Telecommunications Bureau

**PETITION FOR WAIVER OF
SECTION 20.18(e) OF THE COMMISSION'S RULES**

Pursuant to the Wireless Telecommunications Bureau's ("Bureau") *Public Notice*, of December 24, 1998, and Sections 1.3 and 24.819 of the Commission's rules, PrimeCo Personal Communications, L.P., for itself and the partnerships in which it holds a majority ownership and sole general partnership interest (collectively "PrimeCo"),¹ hereby petitions the Bureau for a waiver of the October 1, 2001 enhanced 911 ("E-911") Phase II compliance deadline of Section 20.18(e) of the Commission's rules.² Grant of the waiver is in the public interest and will allow PrimeCo and other wireless carriers sufficient time to determine the feasibility of handset-based solutions and, if deployed, to implement such a solution on a phased-in basis.

¹ PrimeCo is a broadband PCS licensee in a number of MTA markets, and is the majority owner and sole general partner in broadband PCS licensees Dallas MTA, L.P., Houston MTA, L.P., and San Antonio MTA, L.P.

² See 47 C.F.R. §§ 1.3, 24.819; *Wireless Telecommunications Bureau Outlines Guidelines For Wireless E911 Rule Waivers For Handset Based Approaches To Phase II Automatic Location Identification Requirements*, CC Docket No. 94-102, *Public Notice*, DA 98-2631 (WTB rel. Dec. 24, 1998) ("Public Notice").

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PrimeCo submits that carriers should be allowed to implement a handset solution to the Phase II requirements at their discretion if: (1) such solutions exceed current requirements for ALI accuracy; and (2) compliant handsets are offered to subscribers in advance of the October 1, 2001 compliance deadline. Consistent with the *Public Notice*, PrimeCo expressly reserves the right to choose either a network- or handset-based Phase II solution.³

INTRODUCTION/BACKGROUND

The Commission's E-911 Phase II rules require that by October 1, 2001, broadband PCS providers have the capability to provide designated public safety answering points ("PSAPs") with ALI if certain conditions are met.⁴ PSAPs must be given the "location of a 911 call by longitude and latitude within a radius of 125 meters using root mean square techniques."⁵ The rules further specify that Phase II requires carriers to have the "capability to identify the latitude and longitude of a mobile unit making a 911 call, within a radius of no more than 125 meters in 67 percent of all cases."⁶

In adopting the Phase II rules, the Commission stated its intention to "adopt general performance criteria, rather than extensive technical standards, to guide the development of wireless 911 services."⁷ The Phase II implementation deadline was intended to "provid[e] a time

³ *Public Notice* at 5. Alternatively, by this filing PrimeCo seeks modification of Section 20.18(e) as specified herein. PrimeCo also agrees that an industry-wide waiver is appropriate and will facilitate examination of the feasibility of handset solutions. *See id.*

⁴ 47 C.F.R. §§ 20.18(e), (f).

⁵ *Id.* § 20.18(e).

⁶ *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd. 18676, 18712 (1996) ("*E911 Report and Order*"), *recon.*, 12 FCC Rcd. 22665, 22726 (1997) ("*E911 Reconsideration Order*").

⁷ *E911 Report and Order*, 11 FCC Rcd. at 18714.

frame by which these unspecified parameters and standards must be established or resolved by the various parties involved.”⁸

While the Commission initially expected that Phase II ALI capabilities would be implemented on a network basis, shortly after adoption of the *E-911 Report and Order* a number of parties informed the Commission of the possibilities of handset-based solutions utilizing, for example, GPS technologies.⁹ The Commission recognized that ALI technologies were evolving rapidly and sought to ensure that efforts to deploy Phase II ALI were “technologically and competitively neutral.”¹⁰ The Commission thus confirmed that the Phase II ALI requirements would not be applied in a way that “would hamper the development and deployment of the best and most efficient ALI technologies and systems” and that waivers might be appropriate depending upon technological developments with regard to ALI.¹¹

Today, more than sixteen wireless equipment vendors are proceeding with prototypes that integrate GPS into handsets for the provision of Phase II ALI.¹² Recent tests indicate that such handsets may provide ALI that *exceeds* the Phase II accuracy requirements and that ALI-capable handsets may be available much earlier than the current Phase II deadline. PrimeCo has witnessed trials of these technologies and is evaluating test results for the purpose of determining the technical and commercial feasibility of handset-based solutions. Additional tests are planned. In addition, standards for handset-based solutions are still being finalized, and vendors are pursuing efforts to determine whether commercial products should be developed.

⁸ *E911 Reconsideration Order*, 12 FCC Rcd. at 22725.

⁹ *Id.* at 22720, 22725.

¹⁰ *Id.* at 22725.

¹¹ *Id.* at 22725.

¹² *See* SnapTrack Press Release, September 23, 1998, at 1 .

Thus, while vendors, manufacturers, and carriers are moving quickly to determine the feasibility of a handset solution, a handset solution to Phase II clearly cannot be *fully* implemented by October 1, 2001. In this regard, the Bureau itself has acknowledged that it “may not be possible or economically feasible for carriers to promote ALI for the embedded base of handsets . . . on the date set by the current Commission rules” and for this reason, expressed a willingness to consider proposals to phase in implementation or to apply the Phase II requirements only to new phones.¹³

The Bureau has asked waiver applicants to address the following issues:

- the accuracy and reliability of handset-based Phase II solutions, including field test results involving different geographical environments;
- timetables for implementing handset-based Phase II solutions, including information regarding the expected implementation rate at which non-ALI capable handsets would be replaced or upgraded;
- the costs of such upgrades or modifications; and
- steps the carrier plans to take to address roamer situations, including information concerning roamer use of 911 services in the carrier’s service area.¹⁴

Provided herein is information available, to date, regarding possible handset-based Phase II ALI solutions. This information is preliminary in nature due to the fact that the feasibility of potential handset-based Phase II solutions is under review and has not yet been fully determined. PrimeCo will therefore supplement the record upon Commission request if additional information is needed to process the instant waiver filing.

¹³ *Public Notice* at 2-3.

¹⁴ *Id.* at 4.

DISCUSSION

I. INFORMATION REQUESTED BY THE BUREAU

PrimeCo below addresses the Bureau's information requests, in the order in which they appear in the *Public Notice*: (1) accuracy; (2) timetables; (3) deployment costs; and (4) roamer situations. By way of general background, and as the Commission is aware, several network-and handset-based solutions are currently being developed for CDMA carriers. For example, PrimeCo vendor Lucent has informed the Company that it is developing and testing network-and handset-based solutions, and PrimeCo continues to review both options. Nevertheless, at this point, PrimeCo believes that handset-based solutions have the potential to provide a highly accurate ALI service, potentially at a significantly lower cost than a network-based solution. Moreover, it appears that ALI-capable handsets may be commercially available well in advance of the current Phase II deadline. Therefore, handset solutions should continue to be explored.

A. Accuracy — ALI May Be Provided by Handset-Based Solutions with Better Accuracy and Reliability than Required Under the Commission's Rules

According to the Bureau, "one of the most critical factors in providing help to 911 callers in emergency situations is the accuracy of the location information."¹⁵ The Commission's rules require licensees to implement technology capable of locating a 911 call by longitude and latitude within a radius of 125 meters for 67% of all such calls.¹⁶ There have been field tests to date, however, which indicate that handset-based solutions may be capable of providing *more accurate* ALI than that required under the rules.¹⁷ These tests included calls a variety of

¹⁵ *Public Notice* at 3.

¹⁶ 47 C.F.R. § 20.18(e).

¹⁷ See Integrated Data Communications, *Ex Parte* Presentation, Dec. 30, 1998, at 3-4 ("IDC *Ex Parte*") (discussing King County results: 125 feet for 100% of calls, 40 feet for 80% of calls, and 20-22 feet for 70% of calls); Cambridge Positioning Systems Ltd *Ex Parte*,
(continued...)

geographic environments, including narrow alleyways and moving vehicles, with high degrees of accuracy.¹⁸ Similar tests conducted in Denver, Colorado by SnapTrack, U S WEST Wireless (like PrimeCo, a CDMA-based carrier), SignalSoft, and two PSAPs provide additional information regarding the potential for handset-based solutions. These tests also included urban, suburban, rural, and mountainous areas and, again, the ALI accuracy exceeded the requirements of the Commission's rules.¹⁹

PrimeCo emphasizes that these initial tests were with specially-designed handsets and that some results were less promising, particularly for multi-story in-building settings. Nonetheless, the results are significant and have encouraged vendors and carriers to initiate additional testing and other activities to gauge the feasibility of a handset-based approach.

B. Implementation Timetable — A Handset-based ALI Solution Should Be Commercially Available Prior to the October 1, 2001 Deadline.

Tests by other carriers, including other CDMA-based carriers, are expected in the coming year. This should allow PrimeCo to better determine whether handset-based solutions are a viable option for compliance with the Commission's Phase II ALI rules. Furthermore, industry standards bodies are working to finalize standards to ensure that ALI-capable handsets can be commercially available prior to October 1, 2001.²⁰ Thus, it is possible that product development can be completed and handsets commercially available approximately one year prior to the Phase

¹⁷ (...continued)
ITS World, Apr. 14, 1997; Tandler Cellular, Inc. *Ex Parte* Presentation, Oct. 15, 1997, at 3; Tender Cellular, Inc. Reply Comments, CC Docket No. 94-102, Aug. 19, 1996, at 2.

¹⁸ See IDC *Ex Parte*.

¹⁹ SnapTrack, Inc. *Ex Parte* Presentation, Summary Results, Denver Testing, Oct. 30, 1998.

²⁰ The Telecommunications Industry Association estimates that handset standards will be finalized 1Q99. Letter from Phil Brown, Chair, Working Group I, TR-45.5 Subc., to Kim Chang, Vice Chair Working Group II, TR-45.5 Subc., Nov. 18, 1998, at 1.

II implementation deadline.²¹ To confirm, while PrimeCo is hopeful that an internal decision regarding the feasibility of a handset solution will be made shortly, at this date PrimeCo is unable to commit to a particular solution or provide exact milestones in its deployment schedule.

In any event, and even if a handset solution proves feasible, it is unlikely that Phase II-capable handsets will achieve sufficient market penetration by the October 1, 2001 deadline to achieve the 67% accuracy threshold required under the rules. PrimeCo submits that the only way a handset solution should be deployed is through a phased-in approach over time. Based on handset turnover estimates, significant compliance will be achieved in short order. Any “flash cut” requirement to replace all existing handsets with ALI-capable handsets is clearly unrealistic and cost-prohibitive. Simply put, it would make the handset solution entirely untenable.

Importantly, however, the marketplace will ensure rapid deployment. If current projections hold firm, ALI-capable handsets will be available for customer purchase well in advance of the current Phase II deadline. Further, PrimeCo’s experience is that the average digital handset life is two-three years — thus ensuring that large numbers of customers will have ALI-capable handsets proximate to the Phase II deadline.²² Further, handset replacement rates are likely to remain high if handset features are desirable to customers, as expected. In this regard, consumers have demonstrated a demand for location technologies, and demand for ALI-capable phones is thus expected to be great.²³

²¹ SnapTrack Press Release, September 23, 1998, at 1.

²² See also BT Alex. Brown, *Handsets! Rapid Growth, Explosive Innovation, Intense Competition*, June 29, 1998; *Mobile Family Segment To Churn \$4 Billion, Study Says*, Newsbytes, Aug. 21, 1998, (22% replacement rate); *Briefs*, Mobile Phone News, Aug. 18, 1997 (17% replacement rate); *SnapTrack Ex Parte*, Oct. 30, 1998 (95% of handsets ALI-capable by 2004).

²³ See Tandler Cellular, Inc. *Ex Parte*, Oct. 14, 1997, at 3-4; Cambridge Positioning Systems *Ex Parte* at 3; TruePosition *Ex Parte*, Wireless E911 Survey, Sept. 16, 1997, at (continued...)

Based on the foregoing, PrimeCo urges the Commission to endorse phased-in implementation should ALI handset solutions prove appropriate for carrier deployment. The promise of potentially better accuracy and early market deployment support this approach.

C. Cost — A Phased-In Approach to Handset Upgrades or Replacements May Prove to Be a Cost-Effective Means of Phase II Compliance

As discussed above, PrimeCo believes that allowing market forces to drive the implementation of a handset solutions will serve the public interest. Implementing handset solutions on a “flash cut” basis will be cost-prohibitive and will make deployment of a handset solution untenable. Given the projected rapid turnover of handsets and the costs associated with replacement, there is no need to require carriers to replace existing handsets with ALI-capable handsets. Finally, vendors are also exploring ways to retrofit handsets with ALI capabilities. This may also facilitate rapid deployment and market acceptance without considerable expense.²⁴

D. Roamers — Location Information Will Be Supplied For 911 Calls From Roamers

The Bureau’s concern that a handset-based solution to the Phase II ALI requirements may preclude PSAPs from obtaining location information for some roamers making 911 calls is misplaced. PrimeCo submits that all 911 calls placed by roamers will be accompanied by either Phase I or Phase II location information and, in most instances, 911 calls will be accompanied by Phase II location information.

All 911 calls placed by roamers with ALI-enabled handsets will pass along Phase II ALI to the appropriate PSAP, regardless of the technology utilized by the network on which the call is

²³ (...continued)
3; KSI, Inc. *Ex Parte*, July 13, 1995.

²⁴ One solution being tested is use of a GPS chip built into replacement batteries. Alternatively, the GPS chip might potentially be incorporated into a thin “sleeve” to be inserted between the phone and the battery. *See IDC Ex Parte* at 6.

placed for the provision of Phase II ALI. The only problem occurs where a carrier deploys a network-based solution and one of its subscribers roams onto a network deploying a handset-based solution *and* the subscriber's phone is not ALI-capable.

Again, in these cases, Phase I location information still would be passed along with any 911 call made by the roamer. Given that both chip and handset manufacturers will likely incorporate ALI technology into their products, and that high replacement rates for existing handsets are expected, this issue should largely disappear within three years. Accordingly, grant of the requested waiver will not create unacceptable problems in this area.

II. WAIVER REQUEST

PrimeCo requests a waiver of Section 20.18(e) that would deem it in compliance with the rule if it offers to subscribers ALI-capable handsets prior to October 1, 2001 *and* such handsets supply ALI that exceeds the accuracy/reliability thresholds of Section 20.18(e) of the rules.

Pursuant to Sections 1.3 and 24.819 of the Commission's rules, a waiver is warranted if:

- the underlying purpose of the rule(s) would not be served or would be frustrated and a waiver would serve the public interest;
- application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest; or
- good cause for waiving the rule can be demonstrated.²⁵

As demonstrated herein, PrimeCo submits that adherence to the existing Phase II implementation deadline for handset solutions is inconsistent with the underlying purpose of the rule and that waiver of the deadline to allow phased-in compliance would serve the public interest.

The Commission adopted the Phase II deadline to promote public safety by ensuring the rapid, efficient, and effective deployment of ALI, and to "encourage entrepreneurial efforts and

²⁵ 47 C.F.R. §§ 1.3, 24.819.

investment to serve this market” — *not* to preclude the development and deployment of the best and most efficient ALI technologies and systems.²⁶

As discussed above, preliminary tests indicate that handsets with GPS technology may exceed the Commission’s Phase II ALI requirements, and that the ALI-capable handsets will be available before the Phase II deadline. Imposing a rigid compliance deadline would preclude carriers and entrepreneurial vendors from potentially developing a more effective and accurate ALI solution, thus undermining the Commission’s objectives. Waiver of the deadline would thus serve the public interest and good cause has been shown.

CONCLUSION

For the foregoing reasons, the Commission should waive Section 20.18(e) such that PrimeCo would be deemed in compliance with the Phase II implementation deadline if ALI-capable handsets which exceed current ALI requirements are made available to subscribers prior to October 1, 2001.

Respectfully submitted,

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February 4, 1999

²⁶ *E911 Reconsideration Order*, 12 FCC Rcd. at 22723, 22725.

CERTIFICATE OF SERVICE

I, Loretta B. Rias, hereby certify that on this 4th day of February 1999, copies of the foregoing were served on the following by hand:

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A handwritten signature in cursive script, reading "Loretta B. Rias", written over a horizontal line.

Loretta B. Rias